UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,689	06/13/2006	Jacob Strom	4147-170	6553

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/582,689	STROM, JACOB
Office Action Summary	Examiner	Art Unit
	Jose L. Couso	2624

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 June 2006*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-30* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *6/13/06, 1/4/07*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1.　　35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.　　Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 30 as a whole defines a signal, and "[a] transitory, propagating signal … is not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter." (*In re Nuijten*, 84 USPQ2d 1495 (Fed. Cir. 2007)).

3.　　35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows (see also MPEP 2106):

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and

the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

4.   Claims 15-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 15-29 define a "system". However, while the preamble defines a "system", which would typically be indicative of an "apparatus", the body of the claim lacks definite structure indicative of a physical apparatus. Furthermore, the specification indicates that the invention may be embodied as pure software on page 38, lines 26-29. Therefore, the claim as a whole appears to be nothing more than a "system" of software elements, thus defining functional descriptive material per se.

Functional descriptive material may be statutory if it resides on a "computer-readable medium or computer-readable memory". The claim(s) indicated above lack structure, and do not define a computer readable medium and are thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests:

1.   Amending the claim(s) to embody the program on "computer-readable medium" or equivalent; assuming the specification does NOT define the computer

readable medium as a "signal", "carrier wave", or "transmission medium" which are

deemed non-statutory; or

2.   Adding structure to the body of the claim that would clearly define a

statutory apparatus.

Any amendment to the claim should be commensurate with its corresponding

disclosure.

Note:

"A transitory, propagating signal … is not a "process, machine, manufacture, or

composition of matter." Those four categories define the explicit scope and reach of

subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be

patentable subject matter." (*In re Nuijten*, 84 USPQ2d 1495 (Fed. Cir. 2007)).

Should the full scope of the claim as properly read in light of the disclosure

encompass non-statutory subject matter such as a "signal", the claim as a whole would

be non-statutory.   Should the applicant's specification define or exemplify the computer

readable medium or memory (or whatever language applicant chooses to recite a

computer readable medium equivalent) as statutory tangible products such as a hard

drive, ROM, RAM, etc, **as well as** a non-statutory entity such as a "signal", "carrier

wave", or "transmission medium", the examiner suggests amending the claim to *include*

the disclosed tangible computer readable storage media, while at the same time

excluding the intangible transitory media such as signals, carrier waves, etc.

5.   Claims 1-14 are rejected under 35 U.S.C. 101 as not falling within one of the four

statutory categories of invention.   Supreme Court precedent[1] and recent Federal Circuit

decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to

another statutory category (such as a particular apparatus), or (2) transform underlying

subject matter (such as an article or material) to a different state or thing. While the

instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither

transform underlying subject matter nor positively tie to another statutory category that

accomplishes the claimed method steps, and therefore do not qualify as a statutory

process.   For example the compressing method including steps of determining,

providing and selecting is of sufficient breadth that it would be reasonably interpreted as

a series of steps completely performed mentally, verbally or without a machine. The

Applicant has provided no explicit and deliberate definitions of "determining", "providing"

and "selecting" to limit the steps and the claim language itself is sufficiently broad to

read on a person mentally going through the steps.

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in
> public use or on sale in this country, more than one year prior to the date of application for patent in
> the United States.

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[1]   *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk
v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).
[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

7.   Claims 1, 6-8, 13-15, 20-22, and 27-30 are rejected under 35 U.S.C. 102(b) as

being anticipated by Valmiki et al. (U.S. Patent No. 6,636,222).

With regard to claim 1, Valmiki describes determining a color codeword that is a

representation of the colors of the multiple image elements (refer for example to column

8, lines 4-51, 53-55 and 57-58); determining an alpha codeword that is a representation

of the alpha values of the multiple image elements (refer for example to column 8, lines

55-58); providing an alpha modifying codeword that is a representation of a set of

multiple alpha modifiers for modifying an alpha value generated based on the alpha

codeword (refer for example to column 9, lines 20-25); and selecting, for each image

element in the image block, an alpha modifier index associated with an alpha modifier

from the alpha modifier set (refer to column 15, line 9 through column 16, line 61).

As to claim 6, Valmiki describes wherein the alpha modifying codeword providing

step comprises selecting the alpha modifier set from an alpha table multiple alpha

modifier sets, whereby the alpha modifying codeword identification of the selected alpha

modifier set from the alpha table (refer for example to column 15, lines 39-67).

In regard to claim 7, Valmiki describes decomposing the image into multiple

image blocks, each image block multiple image elements and determining, for at least

one image block, a compressed image block representation by compressing the at least

one image block (refer for example to column 8, lines 16-48).

With regard to claim 8, Valmiki describes providing a set of multiple alpha

modifiers based on the alpha modifying codeword (refer for example to column 8, lines

55-58); for at least one image element in the image block generating a color

representation based on the color codeword (refer for example to column 8, lines 4-51,

53-55 and 57-58); generating an alpha representation based on the alpha codeword

(refer for example to column 8, lines 55-58); selecting an alpha modifier from the alpha

modifier set based on the alpha modifier index (refer for example to column 9, lines 20-

25); and modifying the alpha representation based on the selected alpha modifier (refer

to column 15, line 9 through column 16, line 61).

As to claim 13, Valmiki describes wherein the step of providing the alpha modifier

set comprises selecting, based on the alpha modifying codeword, the alpha modifier set

from an alpha table comprising multiple alpha modifier sets (refer to column 15, line 9

through column 16, line 61).

In regard to claim 14, Valmiki describes determining, for at least one compressed

image block representation, at least one decompressed image element representation

by processing the at least one compressed image block representation and generating

an image by processing the at least one decompressed image element representation

(refer for example to column 8, lines 16-48).

With regard to claim 15, Valmiki describes a color quantizer for determining a

color codeword that is a representation of the colors of the multiple image elements

(refer for example to column 8, lines 4-51, 53-55 and 57-58); an alpha quantizer for

determining an alpha codeword that is a representation of the alpha values of the

multiple image elements (refer for example to column 8, lines 55-58); means for

providing an alpha modifying codeword that is a representation of a set of multiple alpha modifiers for modifying an alpha value generated based on the alpha codeword (refer to column 9, lines 20-25); and an index selector for selecting, for each image element in the image block, an alpha modifier index associated with an alpha modifier from the alpha modifier set (refer to column 15, line 9 through column 16, line 61).

As to claim 20, Valmiki describes wherein alpha modifying codeword providing means is configured for selecting the alpha modifier set from an alpha table comprising multiple alpha modifier sets, whereby the alpha modifying codeword enables identification of the selected alpha modifier set from the alpha (refer to column 15, line 9 through column 16, line 61).

In regard to claim 21, Valmiki describes an image decomposing for decomposing an image into multiple image blocks, each image block comprising multiple image elements and at least one image block compressing system (refer for example to column 8, lines 16-48).

With regard to claim 22, Valmiki describes means for providing a set of multiple alpha modifiers based on the alpha modifying codeword (refer for example to column 8, lines 55-58); a color generator for generating a color representation for at least one image element in the image block based on the color codeword (refer for example to column 8, lines 4-51, 53-55 and 57-58); an alpha generator for generating an alpha value for the at least one image element based on the alpha codeword (refer for example to column 9, lines 20-25); a selector for selecting, for the at least one image

element, an alpha modifier from the identified alpha modifier set based on the alpha

modifier index and an alpha modifier for modifying the alpha value based on the

selected alpha modifier (refer to column 15, line 9 through column 16, line 61).

As to claim 27, Valmiki describes wherein the alpha modifier set providing means

is configured for selecting, based on the alpha modifying codeword the alpha modifier

set from an alpha table comprising multiple alpha modifier sets (refer to column 15, line

9 through column 16, line 61).

In regard to claim 28, Valmiki describes at least one system, for at least one

compressed image block representation, at least one decompressed image element

representation and means for processing the at least one decompressed image element

representation in order to generate an image (refer to column 8, lines 16-48).

With regard to claim 29, Valmiki describes an image processing terminal

comprising a system according to claim 15 (see figure 1).

As to claim 30, Valmiki describes a signal representation of an image block

comprising multiple image elements (see figure 6) a color codeword that is a

representation of the colors of the multiple image elements (refer for example to column

8, lines 4-51, 53-55 and 57-58); an alpha codeword that is a representation of the alpha

values of the multiple image elements (refer for example to column 8, lines 55-58); an

alpha modifying codeword that is a representation of a set of multiple alpha modifiers for

modifying an alpha value generated based on the alpha codeword (refer for example to

column 9, lines 20-25); and a sequence of alpha indices, where an alpha modifier index

is associated, for a image element in the image block, with an alpha modifier from the

alpha modifier set (refer to column 15, line 9 through column 16, line 61).

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

        Deering, Bestmann and Takahashi all disclose systems similar to applicant's

claimed invention.

9.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Jose L. Couso whose telephone number is (571) 272-
7388. The examiner can normally be reached on Monday through Friday from 6:30 to
3:00.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Brian Werner, can be reached on (571) 272-7401. The fax phone number
for the organization where this application or proceeding is assigned is (571) 273-8300.
        Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

/Jose L. Couso/
Primary Examiner, Art Unit 2624
February 26, 2009